



Development of Standard MicroTCA Deployment at ESS

PRESENTED BY FAY CHICKEN

2023-10-13

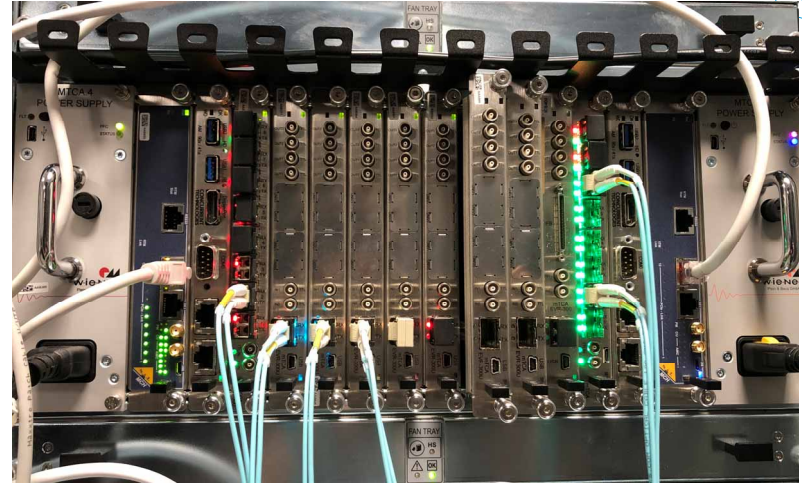
Drive for Standardisation

Over 300 MicroTCA crates will be deployed at the European Spallation Source

Early system assemblies were all individual setups

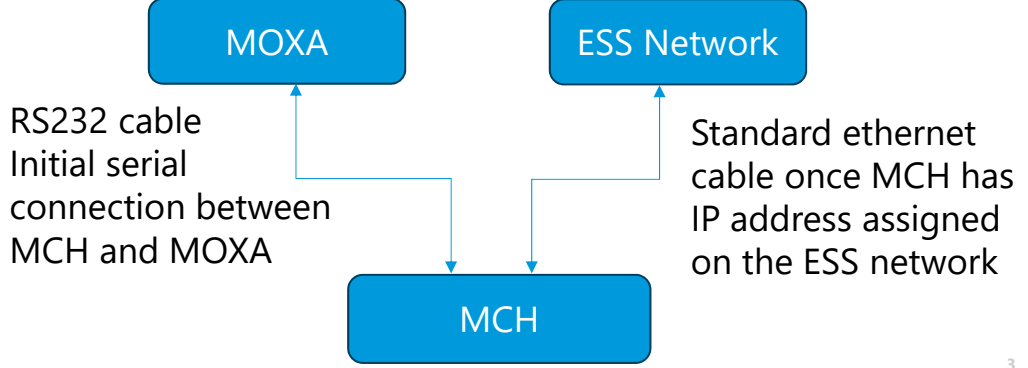
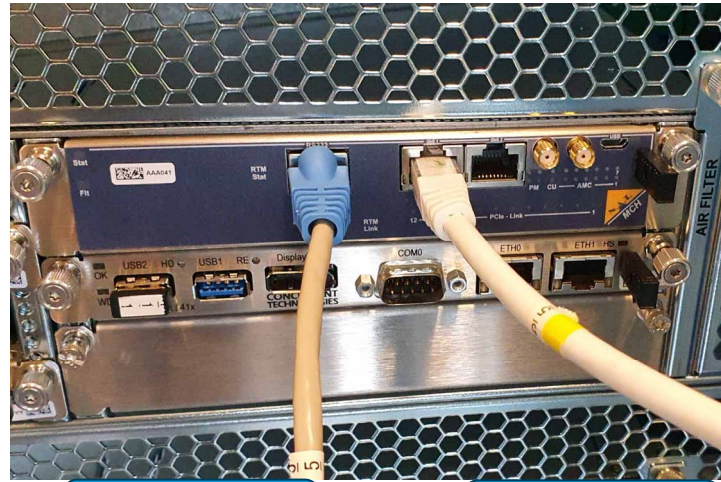
Need to have a basic “vanilla” system setup for easy maintenance and system reliability

Various AMCs, FMCs & RTM configurations creates enough complexity



Micro-Carrier Hub Deployment

- Use of RS232 through MOXA server for initial configuration using serial connection
- Register in Centry (a custom in-house configuration management tool, REST API)
- Switch to Telnet connection once IP is assigned on local network
- Run update through Gitlab-CI or manually through Python scripts





CPU Deployment

Change to BIOS settings to allow PXE boot
Register in CSentry

Linux OS is installed using network boot installer

Post-install job in Ansible installs ESS EPICS Environment and all the standard libraries and kernel drivers



```
◀ Back to Jobs Details Output
run-post-install-configuration Plays 10 Tasks 142 Hosts 1 Elapsed 00:02:17
+
0 Identity added: /tmp/awx_414100_26mdr46s/artifacts/414100/ssh_key_data (/tmp/awx_414100_26mdr46s/artifacts/414100/ssh_key_data)
1 Vault password:
2
3 PLAY [all] ***** 12:28:00
4
5 TASK [Gathering Facts] ***** 12:28:00
6 ok: [ccpu-38533-045.cslab.ess.lu.se]
7
8 PLAY [all] ***** 12:28:02
9
10 TASK [ics-ans-role-dns-client : Configure /etc/resolv.conf] ***** 12:28:02
11 changed: [ccpu-38533-045.cslab.ess.lu.se]
12
13 TASK [ics-ans-role-dns-client : Remove DNS entries from centos ifcfg files] **** 12:28:04
14 included: /tmp/awx_414100_26mdr46s/requirements_roles/ics-ans-role-dns-client/tasks/centos.yml for ccpu-38533-045.cslab.ess.lu.se
15
16 TASK [ics-ans-role-dns-client : Find files that contains the DNS and SEARCH options in /etc/sysconfig/network-scripts] *** 12:28:04
```